the para aortic nodal areas to the level of the 12th thoracic vertebra. Some patients in whom positive aortic nodes have been so treated are apparently living free of tumor, but further studies of larger numbers are necessary to determine how many patients will benefit from these additional measures. At present, lymphangiography in cervical cancer is most useful when other diagnostic and therapeutic steps, such as surgical staging and expanded aortic treatment fields, are available. Because of the urgent need for accurate information about lymph node metastases, efforts to improve the usefulness of lymphangiography should continue.

LEO D. LAGASSE, MD

REFERENCES

Lecart C, Lenfant P: Critical appraisal of lymphangiography in cancer of the female genital tract. Lymphology 4:100-108, Sep 1974

Piver MS, Wallace S, Castro JR: The accuracy of lymphangiography in carcinoma of the uterine cervix. Am J Radiol 3:278-283, Feb 1971

The Oxytocin Challenge Test

THE OXYTOCIN CHALLENGE TEST (OCT) is a method currently being used to evaluate uteroplacental respiratory function before labor. The test is done by recording fetal heart rate (FHR) and uterine contractions (UC) on a strip chart by means of a suitable external fetal monitor. The FHR response of late deceleration suggests uteroplacental respiratory insufficiency as shown by Hon and others during intrapartum fetal studies. Uterine contractions are known to interfere with uterine blood flow and are used in this test to provide an intermittant hypoxic stress to the fetus. If the FHR response to spontaneous or oxytocin-induced uterine contractions that are occurring at a frequency of three per 10 minutes shows no late decleration (negative OCT), the fetus is believed to be in little or no danger of intrauterine demise for one week following the OCT. When persistent late deceleration of the FHR is present the patient is said to have a positive OCT and one can no longer be assured that the fetus will survive continued intrauterine existence. If fetal maturity is likely (lecithin-sphingomyelin ratio, $L/S>2.0$) delivery would seem advisable. However, it should be emphasized that the positive OCT does not always signify imminent fetal danger and one should use other methods to assess fetal well-being (for example, a 24-hour urinary estriol test) when the OCT is positive and fetal maturity is unlikely ($L/S<2.0$).

The OCT gives rapid information about fetal well-being and has not been associated with an increased incidence of premature labor. It appears that the clinical value of the OCT is to allow one to avoid unnecessary premature delivery in patients at high risk for antepartum uteroplacental insufficiency.

ROGER K. FREEMAN, MD

REFERENCES

Ray M, Freeman RK, Pine S, et al: Clinical experience with the oxytocin challenge test. Am J Obstet Gynecol 114:1-9, Sep 1972

Freeman RK: The clinical value of antepartum fetal heart rate monitoring, *In* Gluck L (Ed): Modern Perinatal Medicine, Chicago, Year Book Medical Publishers, In press

Cryosurgery

THE MANAGEMENT of benign diseases of the visible portion of the female genital tract has been significantly simplified following the introduction of cryosurgical therapy to the physician's armamentarium. Chronic cervicitis, that is, columnar tissue on the ectocervix, has been shown to respond favorably to outpatient cryotherapy with minimal complications. The success rate approaches 90 percent, and the technique is superior to hot cautery and avoids the hazards as well as expense of conization of the cervix. In fact, with the advent of cryosurgery, cervical conization is no longer warranted as treatment for "cervicitis."

When a physician desires to treat a patient with freezing for benign cervical disease, a Papanicolaou test must first be given and normal results obtained. Freezing is best done right after a menstrual period. During the treatment session, which is done without anesthesia or analgesia, it is most important that the iceball extend at least three to four millimeters onto healthy appearing tissue.

Cryosurgical therapy is also of benefit in the management of patients with resistant condyloma acuminata of the vulva, that is, non- or partially-responsive to podophyllin. When using the technique in a patient with vulvar condyloma acuminata, it is important to thoroughly freeze the base of the vulva but not an area greater than 2 or 3 cm in diameter in order to avoid excessive post-treatment complications.

The only significant sequela following cryosurgery has been a profuse watery discharge. Cervical stenosis and postoperative hemorrhage have not

been seen in any substantial number of patients.

Investigations are now being carried out using cryosurgery in the management of patients with cervical intraepithelial neoplasia, that is, dysplasia and carcinoma *in situ*. These studies are still investigational and must only be done by those who are experts in colposcopy.

DUANE E. TOWNSEND, MD

REFERENCES

Townsend DE, Ostergard DR: Cryocauterization for preinvasive cervical neoplasia. Reproductive Med 6:55, Apr 1971

Townsend DE, Ostergard DR, Lickrish GM: Cryosurgery for benign disease of the uterine cervix. J Obstet Gynecol Br Commonwealth 78:667, Jul 1971

Electronic Monitoring of the Fetus and Its Cost

FOR MANY YEARS fetal heart rate has been used as an indicator of fetal distress. Recent electronic advances make it possible for this to be done continuously rather than intermittently. The patterns of heart rate change elucidated by Hon enable the obstetrician to more adequately manage his fetal patient. This can be done at a relatively low cost (about $35.00). Some investigators have shown there to be a decrease in perinatal mortality coincident with the use of continuous fetal heart rate monitoring. Assuming fetal brain damage occurs before fetal death, one might anticipate a reduction in perinatal brain damage associated with continuous monitoring. If such a reduction occurs, it would more than compensate the cost to each patient.

E. J. QUILLIGAN, MD

REFERENCES

Hon EH: Apparatus for continuous monitoring of the fetal heart rate. Yale J Biol Med 32:397-399, Apr 1960

Paul RH, Hon EH: Clinical fetal monitoring—V: Effect on perinatal outcome. Am J Obstet Gynecol 118:529-533, Feb 1974

Menstrual Extraction

MENSTRUAL EXTRACTION is an office procedure for the evacuation of the uterus before a definitive diagnosis of pregnancy can be established by routine pregnancy tests. It is done usually between the 29th and 42nd day after the first day of the last menstrual period.

The technique is similar to that of a routine therapeutic abortion using suction curettage, except cervical dilatation is unnecessary. Oral analgesics or paracervical block or both can be administered just before the procedure. A small-diameter flexible polythylene cannula (4 to 6 mm Karman® catheter) can be used with either an electric vacuum pump or a hand operated syringe as a vacuum source. Completeness of evacuation can be confirmed by exploring the uterine cavity with a small metal curette. It is important that the patient be examined after two weeks and that a pregnancy test be made. A small percentage of pregnancies may be missed with this procedure.

The major disadvantage is that a certain number of women will be found not to be pregnant and therefore an unnecessary procedure will have been done.

JEROME W. H. NISWONGER, MD

REFERENCES

Hodgson JE, Smith R, Milstein D: Menstrual extraction—Putting it and all its synonyms into proper perspective as pseudonyms. JAMA 228:849-850, May 13, 1974

Karman H, Potts M: Very early abortion using syringe as vacuum source. Lancet 1:1051-1052, May 13, 1972

Pion RJ, Wabrek AJ, Wilson WB: Innovative methods in prevention of the need for abortion. Clin Obstet Gynecol 14:1313-1316, Dec 1971

Luteinizing Hormone-Releasing Hormone as a Provocative Test of Pituitary Gonadotropin Function

NORMAL OVULATION is a result of a synchronization of the hypothalamic-pituitary-ovarian axis. Until recently the functional integrity of the hypothalamus and pituitary could not be evaluated separately. Determination of urinary or serum gonadotropin has served as an index of intactness of hypothalamic-pituitary function. Withdrawal bleeding following progesterone administration indirectly measures the functional integrity of the hypothalamic-pituitary-ovarian axis, although bleeding can occur even when the axis is operating in a dysfunctional manner.

In 1971 luteinizing hormone-releasing hormone (LRH), a hypothalamic hormone, was isolated, the structure determined and the compound subsequently synthesized. The availability of LRH has given the gynecologist a hormone which can measure the ability of the pituitary gland to synthesize as well as release luteinizing hormone (LH) and follicle stimulating hormone (FSH).

Patients presenting with amenorrhea should first be screened for genetic and endocrine causes other than hypothalamic-pituitary-ovarian axis